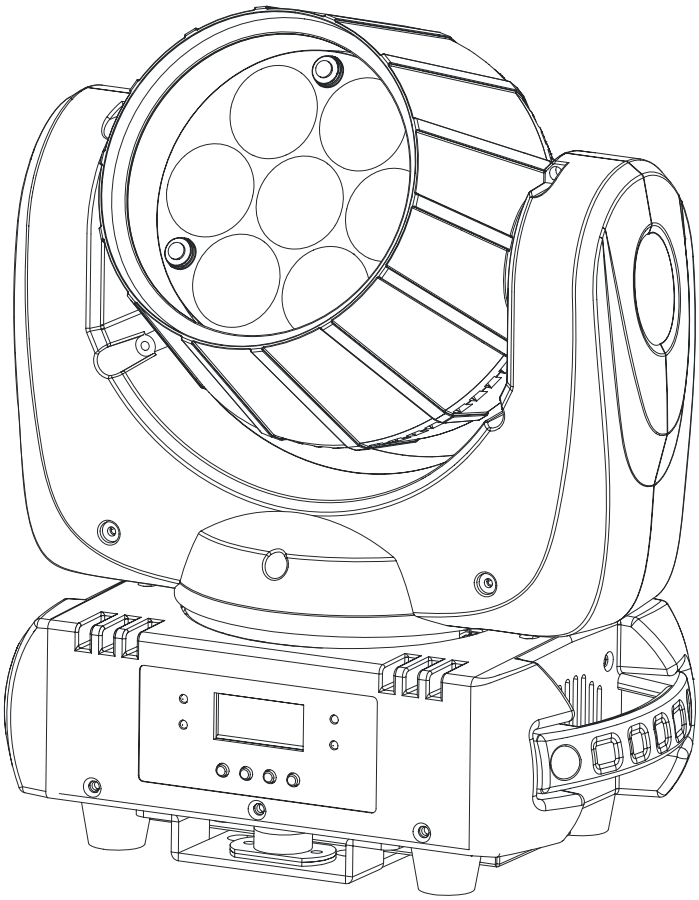
PAGEANT
70 ZOOM



CM-70Z

User Manual

Please read the instruction carefully before use

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1. Safety Instructions

Please read the instruction carefully which includes important information about the installation, usage and maintenance.

WARNING

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.

- Please unpack and check carefully there is no transportation damage before using the unit.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- The unit is for indoor use only. Use only in a dry location.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Please disconnect main power before replacement or servicing.
- Please make sure there are no flammable materials close to the unit while operating as it is fire hazard.
- Please use safety cable when fixes this unit. DO NOT handle the unit by taking its head only, but always by taking its base.
- Maximum ambient temperature is Ta: 40℃. DO NOT operate it where the temperature is higher than this.
- Unit surface temperature may reach up to 75℃. DO NOT touch the housing bare-hand during its operation. Turn off the power and allow about 15 minutes for the unit to cool down before replacing or serving.
- In the event of serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
- DO NOT touch any cables during operation as high voltage might be causing electric shock.

Warning:

- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

Caution:

There are no user serviceable parts inside the unit. DO NOT open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

Installation:

The unit should be mounted via its Omega Quick Release Clamp bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. Make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the fixtures weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

The equipment must be installed by professionals. It must be fixed in a place where is out of the reach of people and no one can pass by or under it.

2. Technical Specifications

Feathers:

◇ Pan/Tilt: 540°⁄220°

◇ 3 operation modes: DMX, Master/Slave, Sound Active

◇ DMX channel: 14 Channel

◇ 0~100% smooth dimming

◇ Variable strobe effects

◇ High power LED moving wash with zoom

◇ LCD Display for easy navigation

Specification:

◇ **Power Voltage:** AC 100-240V, 50/60HZ

◇ **Power Consumption:** 105W

◇ **Power Cable Daisy Chains:** 8 Fixtures Max. (230V, 50Hz)

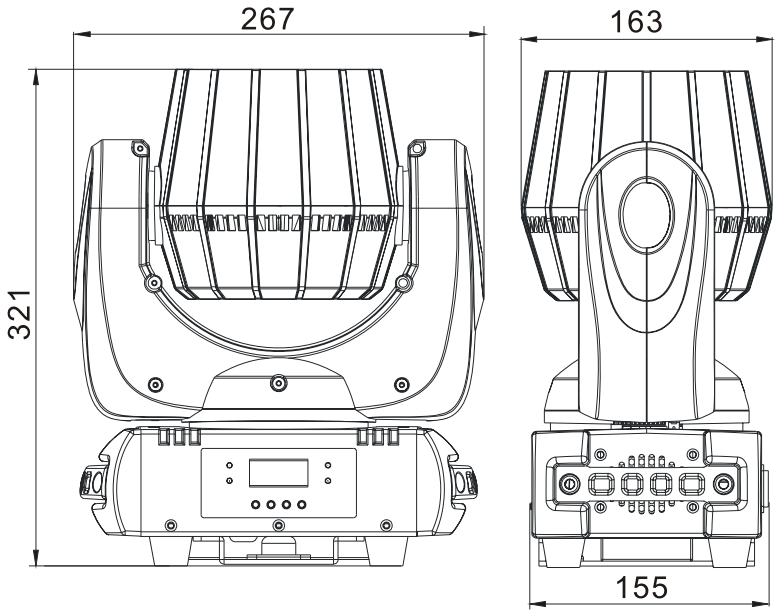
4 Fixtures Max. (120V, 60Hz)

◇ **Light Source:** 7 x 10W OSRAM OSTAR RGBW LED

◇ **Beam angle:** 10° ~ 60°

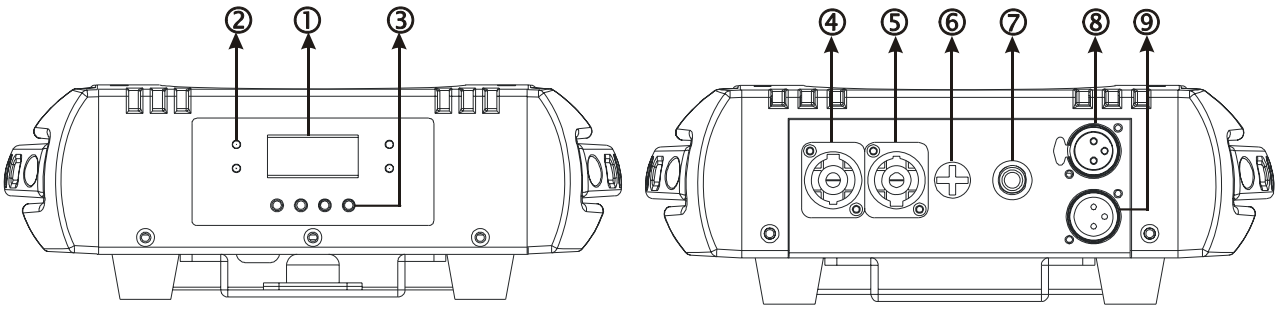
◇ **Weight:** 6.2Kgs

◇ **Dimension:** 267 x 163 x 321mm



3. How To Set The Unit

3.1 Control Panel



1. Function Display:

To show the various menus and the selected functions;

2. LED:

DMX	On	DMX input present
MASTER	On	Master Mode
SLAVE	On	Slave Mode
SOUND	Flashing	Sound activation

3. Button:

MENU	To select the programming functions
▼ **DOWN**	To go backward in the selected functions
▲ **UP**	To go forward in the selected functions
ENTER	To confirm the selected functions

4. MAINS IN: PowerCon connection from main power supply

5. MAINS OUT: PowerCon loop connection for main power supply to the next unit

6. Fuse (T 6.3A)**:** Protects the unit from over-voltage or short circuit

7. ONLY FOR REMOTE CONTROL: Connects with the optional CA-8 to control the unit

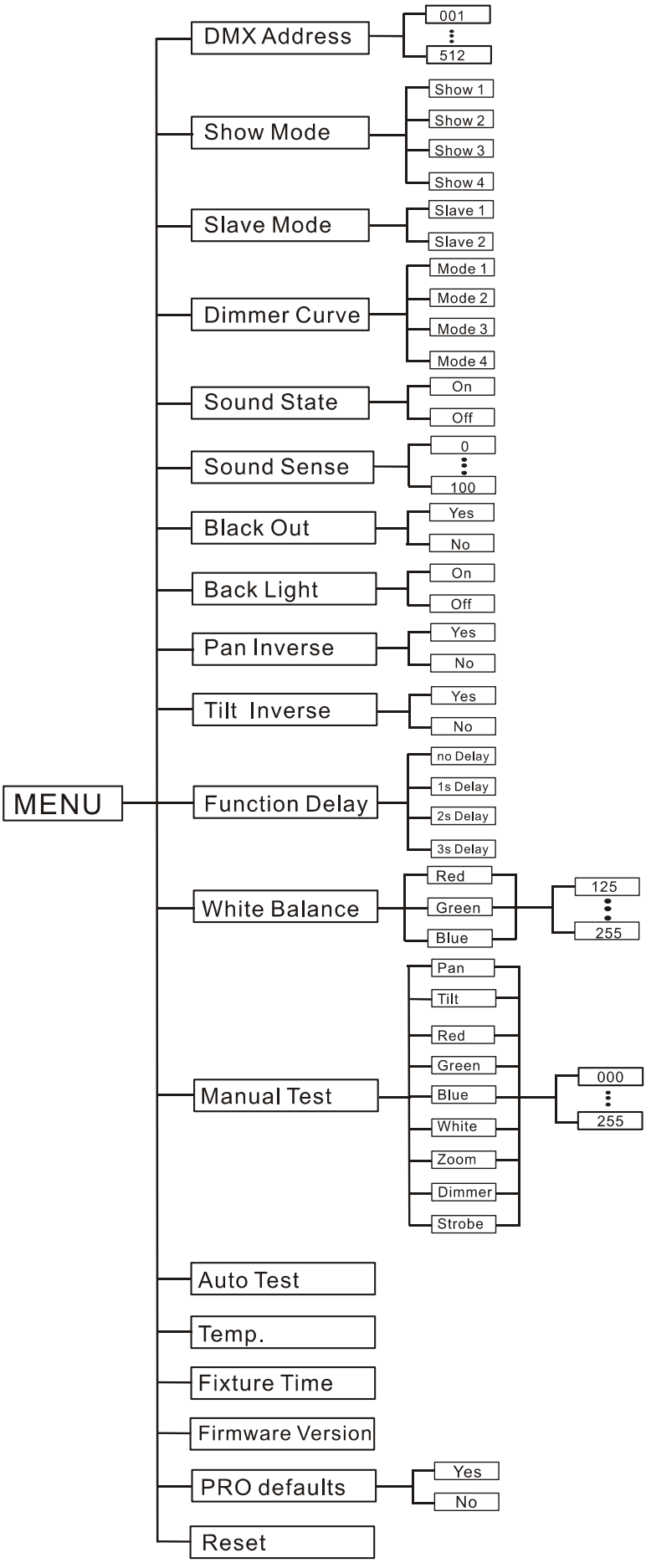
8. DMX OUT: DMX512 link, use 3-pin XLR cable to link the next unit and output DMX signal

9. DMX IN: DMX512 link, use 3-pin XLR cable to link the unit and the DMX controller

3.2 Main Function

To select any of the given functions, press the **MENU** button up to the required selection as shown on the display. Select the function by the **ENTER** button and the display will blink. Use the **DOWN/UP** button to change the mode. Once the required mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

The main functions are shown below:


MENU
DMX Address
001
512
Show Mode
Show 1
Show 2
Show 3
Show 4
Slave Mode
Slave 1
Slave 2
Dimmer Curve
Mode 1
Mode 2
Mode 3
Mode 4
Sound State
On
Off
Sound Sense
0
100
Black Out
Yes
No
Back Light
On
Off
Pan Inverse
Yes
No
Tilt Inverse
Yes
No
Function Delay
no Delay
1s Delay
2s Delay
3s Delay
White Balance
Red
Green
Blue
125
255
Manual Test
Pan
Tilt
Red
Green
Blue
White
Zoom
Dimmer
Strobe
000
255
Auto Test
Temp.
Fixture Time
Firmware Version
PRO defaults
Yes
No
Reset

DMX Address

To select **DMX Address**, press the **ENTER** button to show the **DMX ADDRESS** on the display. Use the **DOWN**/**UP** button to adjust the address from **001** to **512**. Once the address has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Show Mode

To select **Show Mode**, press the **ENTER** button to show the **SHOW MODE** on the display. Use the **DOWN**/**UP** button to select the **Show 1**, **Show 2**, **Show 3** or **Show 4** mode. Once the mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

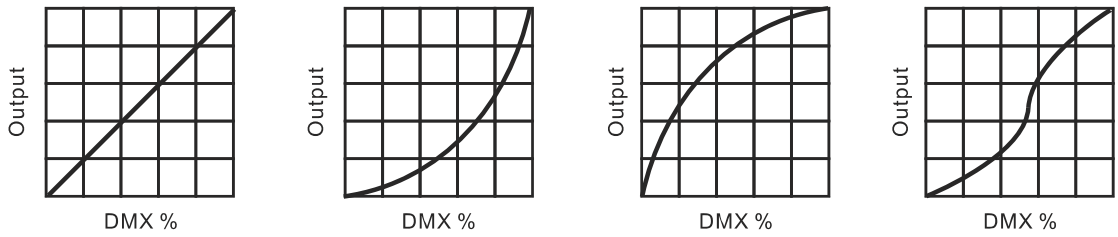
Slave Mode

To select **Slave Mode**, press the **ENTER** button to show the **SLAVE MODE** on the display. Use the **DOWN**/**UP** button to select the **Slave 1** or **Slave 2** mode. Once the mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Dimmer Curve

To select **Dimmer Curve**, press the **ENTER** button to show the **DIMMER CURVE** on the display. Use the **DOWN**/**UP** button to select the **Mode 1**, **Mode 2**, **Mode 3** or **Mode 4**. Once the dimmer mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Dimmer Modes



Mode 1(Optically Linear):

The increase in light intensity appears to be linear as DMX value is increased.

Mode 2(Square Law):

Light intensity control is finer at low levels and coarser at high levels.

Mode 3(Inverse Square Law):

Light intensity control is coarser at low levels and finger at high levels.

Mode 4(S-cure):

Light intensity control is finger at low levels and high levels and coarser at medium levels.

Sound State

To select **Sound State**, press the **ENTER** button to show the **SOUND STATE** on the display. Use the **DOWN**/**UP** button to select the **On** (turn on the Sound Mode) or **Off** (Sound Mode off). Once the mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Sound Sense

To select **Sound Sense,** press the **ENTER** button to show the **SOUND SENSE** on the display. Use the **DOWN**/**UP** button to adjust the sensitivity level, the sensitivity level can be adjusted between 0 (the lowest) and 100 (most sensitive). Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Black Out

To select **Black Out**, press the **ENTER** button to show the **BLACK OUT** on the display. Use the **DOWN**/**UP** button to select the **Yes** (blackout) or **No** (normal). Once selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again.

Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Back Light

To select **Back Light**, press the **ENTER** button to show the **BACK LIGHT** on the display. Use the **DOWN**/**UP** button to select the **On** (LED display always on) or **Off** (LED display off when not use). Once selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Pan Inverse

To select **Pan Inverse**, press the **ENTER** button to show the **PAN INVERSE** on the display. Use the **DOWN**/**UP** button to select the **Yes** (pan inversion) or **No** (normal) mode. Once the mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Tilt Inverse

To select **Tilt Inverse**, press the **ENTER** button to show the **TILT INVERSE** on the display. Use the **DOWN**/**UP** button to select the **Yes** (tilt inversion) or **No**(normal) mode. Once the mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Function Delay

To select the **Function Delay**, press the **ENTER** button to show the **FUNCTION DELAY** on the display. Use the **DOWN**/**UP** button to select the **no Delay** or **1S Delay**, **2S Delay**, **3S Delay** (wait for 1/2/3 seconds before these functions of 14CH are activated/deactivated). Once selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

White Balance

To select **White Balance**, press the **ENTER** button to show the **WHITE BALANCE** on the display. Use the **DOWN**/**UP** button to select the **Red** or **Green**, **Blue**. Once the mode has been selected, press the **ENTER** button to setup, use the **DOWN**/**UP** button to adjust the value (125~255). Once selected, press the **ENTER** button to setup, go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Manual Test

To select **Manual Test**, press the **ENTER** button to show the **MANUAL TEST** on the display. Use the **DOWN**/**UP** button to select the **Pan/Tilt**/**Red**/**Green**/**Blue/White/Zoom/Dimmer** or **Strobe**. Once you find a function or color you wish to test, press the **ENTER** button and use the **DOWN**/**UP** button to adjust the value (000~255). Once the mode has been selected, press the **ENTER** button to setup, go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Auto Test

To select **Auto Test**, press the **ENTER** button and the unit will run self-test by built-in program. To go back to the functions press the **MENU** button again. Press and hold the **MENU** button about one second or wait for one minute to exit the menu mode.

Temp.

To select **Temp.**, press the **ENTER** button and the display will show the current temperature of the unit. When the temperature is under 60℃, the fixture will work normally; when it's between 65 ℃ and 75℃, the fixture will reduce the power output; when it reach 75℃ or higher, the LED will be OFF. To go back to the functions press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Fixture Time

To select **Fixture Time**, press the **ENTER** button and the display will show the number of working hours of the unit. To go back to the functions press the **MENU** button again. Press and hold the

MENU button about one second or wait for one minute to exit the menu mode.

Firmware Version

To select **Firmware Version**, press the **ENTER** button and the display will show the version of software of the unit. To go back to the functions press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

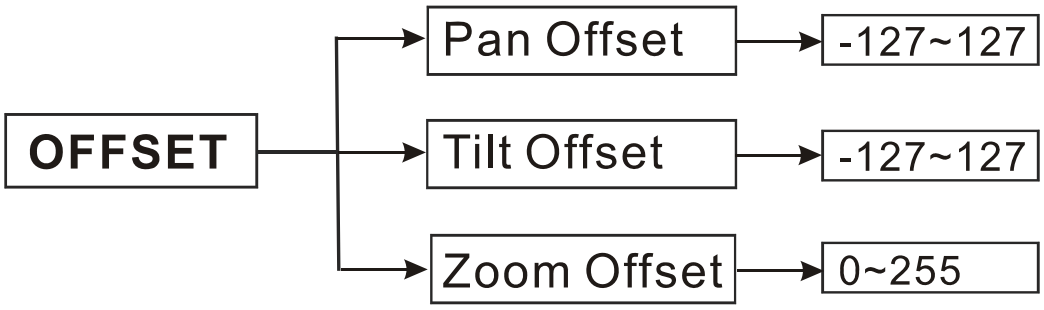
PRO defaults

To select **PRO defaults**, press the **ENTER** button to show the **PRO DEFAULTS** on the display. Use the **DOWN/UP** button to select the **Yes** (run built-in program to set the fixture to PRO Defaults settings) or **No**. Press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

Reset

To select **Reset**, press the **ENTER** button to show the **RESET** on the display and all channels of the unit will return to their standard position. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

3.3 Home Position Adjustment



In the main functions, hold the **ENTER** button for at least 3 seconds to go into offset mode, use the **DOWN/UP** button up to select the **Pan Offset**, **Tilt Offset** or **Zoom Offset**, and pressing the **ENTER** button to confirm. Then use the **DOWN/UP** button to adjust the home position of the Pan, Tilt, and Zoom. Once the position has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button for about one second or wait for one minute to exit the menu mode.

4. How to Control the Unit

You can operate the unit in two ways:

1. Master/slave built-in preprogram function
2. Universal DMX controller

You do not need to turn the unit off when you change the DMX address, the new DMX address setting will take effect immediately. Every time you turn the unit on, it will show “CM-70Z” on the display and move all the motors to their ‘home’ position and you may hear some noises for about 20 seconds. After that the unit will be ready to receive DMX signal or run the built in programs.

4.1 Master/Slave Built In Preprogrammed Function

By linking the units in master/slave connection, the first unit will control the other units to give an automatic, sound activated, synchronized light show. This function is good when you want an instant show. You have to set the first unit in master mode **Show Mode** and select **show 1** or **show 2** or **show 3** or **show 4** mode. Its DMX input jack will have nothing plugged into it, and its master LED will be constantly on and sound LED will flash to the music. The other units will have to set in **slave mode** and select **Slave 1** (normal) or **Slave 2** (2 light show) mode, Their DMX cables plugged into the DMX input jacks (daisy chain) and the slave led lights will constantly on.

2-light show

In slave mode, **Slave 1** means the unit works normally and **Slave 2** means 2-light show. In order to create a great light show, you can set **Slave 2** on the second unit to get contrast movement to each other, even if you have two units only.

4.2 DMX Controller

By using a universal DMX controller to control the units, you will need to set DMX address from 1 to 512 so that the units can receive DMX signal.

Press the **MENU** button up to when the **DMX Address** is showing on the display. Press the **ENTER** button and the display will blink. Use the **DOWN**/**UP** button to change the DMX512 address. Once the address has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Press and hold the **MENU** button about one

second or wait for one minute to exit the menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units：

Channel mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
14 channels	1	15	29	43

4.3 DMX 512 Configuration

14 Channels Mode:

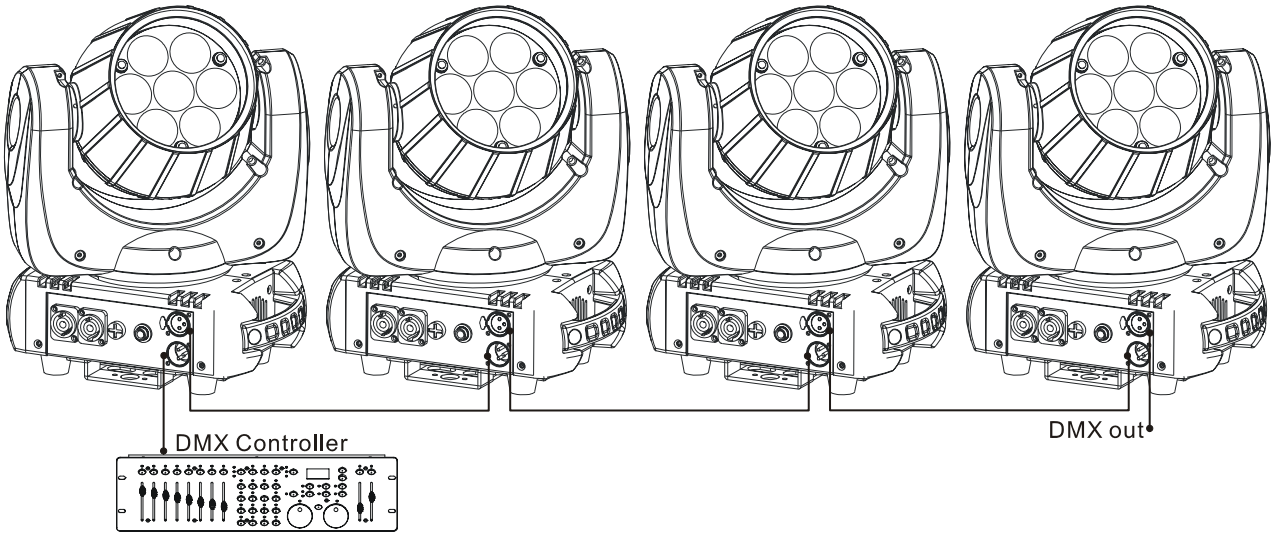
CHANNEL	VALUE	FUNCTION
1	000-255	**PAN**
2	000-255	**PAN FINE**
3	000-255	**TILT**
4	000-255	**TILT FINE**
5	000-255	**PAN/TILT SPEED** fast → slow
6	000-009 010-014 015-255	**SPECIAL FUNCTIONS** No function Reset No function
7	000-255	**DIMMER** 0%~100%
8	000-019 020-024 025-064 065-069 070-084 085-089 090-104 105-109 110-124 125-129 130-144 145-149 150-164 165-169 170-184 185-189	**SHUTTER** Closed Open Strobe 1 (fast →slow) Open Strobe 2: opening pulse (fast →slow) Open Strobe 3: closing pulse (fast →slow) Open Strobe 4: random strobe (fast →slow) Open Strobe 5: random opening pulse (fast →slow) Open Strobe 6: random closing pulse (fast →slow) Open Strobe 7: burst pulse (fast →slow) Open

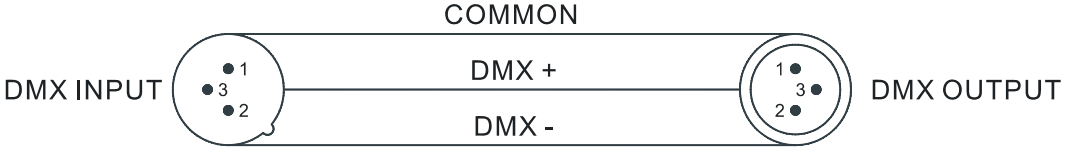
	190-204	Strobe 8: random burst pulse (fast →slow)
	205-209	Open
	210-224	Strobe 9: sine wave (fast →slow)
	225-229	Open
	230-244	Strobe 10: burst (fast →slow)
	245-255	Open
9	000-255	**RED** (0% → 100%)
10	000-255	**GREEN** (0% → 100%)
11	000-255	**BLUE** (0% → 100%)
12	000-255	**WHITE** (0% → 100%)
13		**COLOR MACRO**
	000-009	Open
	010-014	LEE 790 – Moroccan Pink
	015-019	LEE 157 – Pink
	020-024	LEE 332 – Special Rose Pink
	025-029	LEE 328 – Follies Pink
	030-034	LEE 345 – Fuchsia Pink
	035-039	LEE 194 – Surprise Pink
	040-044	LEE 181 – Congo Blue
	045-049	LEE 071 – Tokyo Blue
	050-054	LEE 120 – Deep Blue
	055-059	LEE 079 – Just Blue
	060-064	LEE 132 – Medium Blue
	065-069	LEE 200 – Double CT Blue
	070-074	LEE 161 – State Blue
	075-079	LEE 201 – Full CT Blue
	080-084	LEE 202 – Half CT Blue
	085-089	LEE 117 – Steel Blue
	090-094	LEE 353 – Lighter Blue
	095-099	LEE 118 – Light Blue
	100-104	LEE 116 – Medium Blue Green
	105-109	LEE 124 – Dark Green
	110-114	LEE 139 – Primary Green
	115-119	LEE 089 – Moss Green
	120-124	LEE 122 – Fern Green
	125-129	LEE 738 – JAS Green
	130-134	LEE 088 – Lime Green
	135-139	LEE 100 – Spring Yellow
	140-144	LEE 104 – Deep Amber
	145-149	LEE 179 – Chrome Orange
	150-154	LEE 105 – Orange
	155-159	LEE 021 – Gold Amber
	160-164	LEE 778 – Millennium Gold

	165-169	LEE 135 – Deep Gold Amber
	170-174	LEE 164 – Flame Red
	175-179	Open
		Color wheel rotation effect
	180-201	Clockwise, fast → slow
	202-207	Stop (this will stop wherever the color is at the time)
	208-229	Counter-clockwise, slow → fast
	230-234	Open
		Random color
	235-239	Fast
	240-244	Medium
	245-249	Slow
	250-255	Open
14		**ZOOM**
	000-255	wide → narrow

5. DMX512 Connection

The DMX512 is widely used in intelligent lighting control, with a maximum of 512 channels.





Termination reduces signal errors and to avoid signal transmission problems and interference. It is always advisable to connect a DMX terminal.
(Resistance 120 ohm 1/4W)between pin2(DMX-)and pin3(DMX+) of the last fixture.

1. If you using a controller with 5 pins DMX output, you need to use a 5 to 3 pin adapter-cable.
2. The last units DMX cable has to be terminated with a 120 ohm 1⁄4W resistor between pin 2(DMX-) and pin 3(DMX+) of a 3-pin XLR-plug and plug it in the DMX-output of the last unit.
3. Connect the unit together in a `daisy chain` by XLR plug from the output of the unit to the input of the next unit. The cable can not branched or split to a `Y` cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
4. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units' power is disconnected.
5. Each fixture unit needs to have an address set to receive the data sent by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).
6. The end of the DMX 512 system should be terminated to reduce signal errors.
7. 3 pin XLR connectors are more popular than 5 pin XLR.
   3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
   5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+),
   Pin 4⁄Pin 5: Not used.

6. Troubleshooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, no light and the fan does not work

1. Check the connection of power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors and cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.

3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. Some units don't respond to the easy controller

1. You may have a break in the DMX cabling. Check the LED for the response of the master/ slave mode signal.
2. Wrong DMX address in the unit. Set the proper address.

D. No response to the sound

1. Make sure the unit does not receive DMX signal.
2. Check microphone to see if it is good by tapping the microphone
3. Make sure the fixture is not set into Blackout mode

E. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

7. Fixture Cleaning

The cleaning must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- Clean with soft cloth using normal glass cleaning fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 30 days.

Declaration of Conformity

We declare that our products (lighting equipments) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

EN55103-1: 2009 ; EN55103-2: 2009; EN62471: 2008;
EN61000-3-2: 2006 + A1:2009 + A2:2009; EN61000-3-3: 2008.

&

Harmonized Standard

EN 60598-1:2008 + All:2009; EN 60598-2-17:1989 + A2:1991; EN 62471:2008;
EN 62493: 2010
Safety of household and similar electrical appliances
Part 1: General requirements

Innovation, Quality, Performance